

Rotation Guide

This guide is meant as an aid to help you evaluate your rotation labs and, ultimately, choose a thesis lab. Students have differing needs and expectations from a thesis lab, so this guide includes questions to ask the PI, the lab members, and yourself to see if a lab is a good fit and to see how you react to the questions and answers. This will help you choose a lab that is right for you. You need to know what environment you thrive in and what environment would drive you crazy or leave you feeling without direction. There are no hard and fast rules here, just questions. And at the end of the document you'll find a few links to similar resources that others have put together.

Some of these factors can be judged before you actually begin a rotation. It is appropriate to meet with several professors before you decide on rotations. In this way you can explore several labs in a shorter time period, and you can make an informed decision about the labs where you will rotate. This will also give you a great introduction to the neuroscience faculty. Once you have decided on labs for rotations, be sure to communicate clearly and politely with all the professors that you met with.

The Basics

You may have done rotations in different areas within Neuroscience. So the first, obvious issue is to make sure that you are excited about the subject matter, the scientific questions that are asked in the lab and the methodical approaches that are used in the lab.

Lab demographics are another important aspect of your experience. Post-docs can offer experimental guidance and advice, while other graduate students provide camaraderie. Labs with technicians and/or lab managers can be more organized and reduce your workload by streamlining ordering, waste management, etc. as well as supplying common solutions and media. However, the need for technicians will depend on the type of lab. The financial situation of a lab should also be taken into consideration: not only do you want to make sure you have funding, but the financial status of the lab can impact the types of experiments you are able to do as a graduate student. It is important to note that even labs with less funding will be able to take advantage of departmental resources; in addition, there are many grants available for equipment and supplies for which you can apply as a graduate student.

Finally, the tenure status of a PI can be a consideration for students. Some graduate students will prefer to work for a PI who has already been given tenure; others will join a lab as long as the tenure decision will not come up during their years in the lab (i.e. a brand new faculty member). If you think the PI might be coming up for tenure during your years in the lab, it's reasonable to ask them a direct (polite) question about this issue when you are considering the lab.

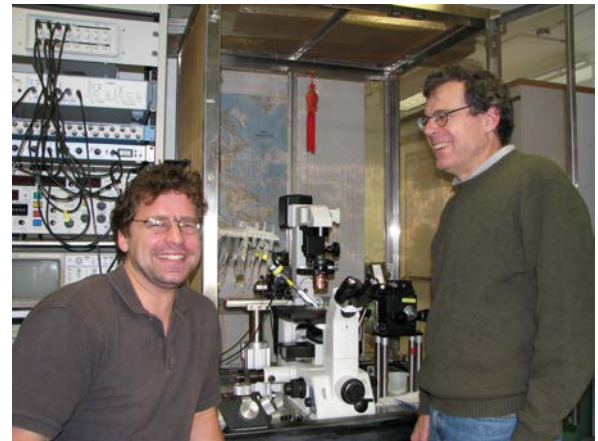
- ❖ How many graduate students are in the lab?
- ❖ How many post-docs?
- ❖ Is there a lab manager?
- ❖ Are there technicians?



- Will these technicians be available to help with my project?
 - Will you make your own reagents and pour your own gels?
 - Is there an system for sharing/organizing regular logistical tasks?
 - ❖ What is the funding situation in this lab?
 - Will there be any problems funding me in the lab?
 - Do post-docs/graduate students complain about an inability to do certain experiments because they cannot order reagents or equipment?
 - ❖ Does the PI have tenure?
 - If not, when will this decision be reached?
- What is the atmosphere at group meeting?
- How frequently do lab members give group meeting?
 - ❖ Do common stocks exist or do individuals have personal caches of reagents?
 - ❖ Are there assigned lab jobs?
 - ❖ What have students gone on to do after graduating? How has this been accepted?
 - ❖ How long is the average thesis?
 - ❖ What is the average time to graduation?
 - ❖ Does the lab interact with neighboring labs?

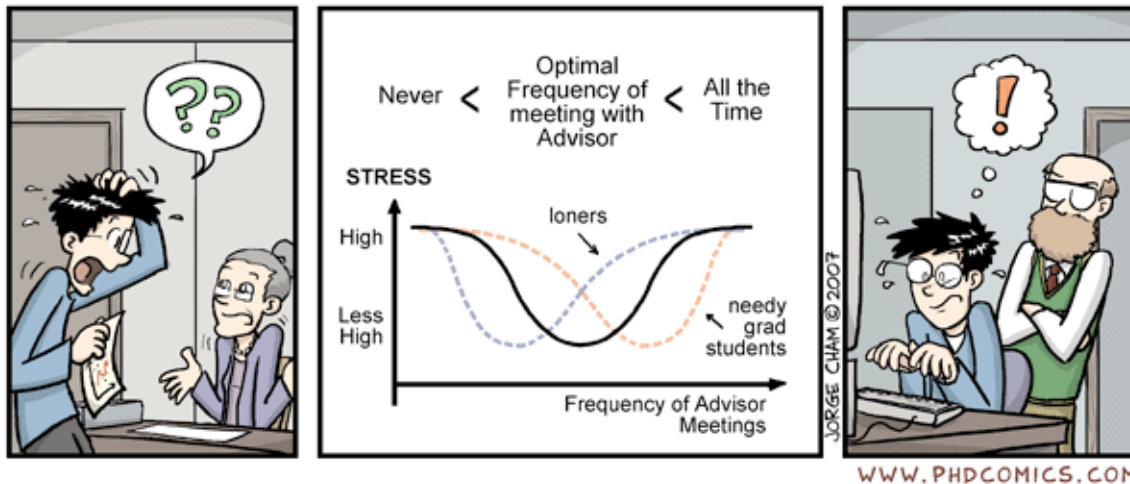
PI managing and mentoring style

Some graduate students will find that they like to talk to their thesis advisor almost every day. Others will prefer to give infrequent reports about their progress. This is an issue of preference, but you should make sure that the PI's style fits yours. Furthermore, the way your PI manages the lab affects the day-to-day running of the lab. Assignment of projects can make a lab congenial or competitive. Students should assess what atmosphere best fits their work style. It can be useful to ask current lab members about the PI's style during one-on-one confidential conversations (e.g., over lunch or coffee).



- ❖ How often do you interact with the PI?
 - Is this more or less than you would like?
 - Do you have a set meeting time, or is it more impromptu?
 - Does the PI come to your bench to inquire about experiments?
 - When you may have a cool result?
 - Infrequently? Daily?
 - Is the PI available to talk to you when you want to discuss things?
 - Is the PI out of town often?
 - Are they accessible by e-mail then?
- ❖ Does the PI have a lot of ideas?
 - How do you filter them?
- ❖ Does the PI know what's going on in the lab?
- ❖ Have you been assigned a post-doc or older graduate student to work with?

- ❖ When your PI is absent, do you feel comfortable asking others for help/advice?
- ❖ Do post-docs/graduate students have the same projects?
 - Similar but complementary projects?
 - If they have the same projects, do they work together or independently?
- ❖ Is there a spirit of competitiveness in the lab?
- ❖ Does the lab work on projects that other labs work on?
 - Is the lab doing the same experiments as these other labs?
 - Does the PI set up a collaboration when this is the case?
 - Does the PI arrange back-to-back publications?
 - Are you encouraged not to talk about certain experiments outside the lab?
- ❖ Do the graduate students/post-docs feel that the PI is interested in their projects?
 - More or less than other projects?
- ❖ Do the lab members feel that they receive equal time from the PI?
- ❖ How does the PI decide when it's time to write up results?
 - Does the grad student/post-doc write the paper, or does the PI?
- ❖ Are you required to attend talks/seminars?
 - How many per week?
- ❖ How often is lab meeting?
 - How long is lab meeting?
 - Do many people ask questions or just a few?
 - Do people give polished talks or show autorads fresh from the developer?
 - How often do people present?
 - Is there a journal club as well?



The Sociability Factor

For some, lab can be a home away from home. If you are keeping long hours doing experiments, it may be important to you that your labmates are also friends. Others prefer to interact more professionally with the other people in the lab. Labs that are highly social can be good places to work: discussion of science spreads to the Squealing Pig as well as the lunchroom, and people are happy to lend a hand when you can't make it in. However, highly social labs can also be labs of high drama. And, if you prefer a more businesslike

atmosphere, the advantages of a highly social lab can be lost if you don't want to always participate in social gatherings.

You will want to feel out the hours that you are expected to be in the lab. Some students may want to work through the weekends on a regular basis, while others (especially those with families) will want to find a lab where it's okay if they come in only sporadically on weekends or not at all. It's also good to know if you can set the hours you spend in lab or if you are expected to be in at the same times as the PI. Some PIs will not care if you come in at noon and stay until midnight; others will prefer that you overlap with their time in the lab at least somewhat. You may also find that if the majority of the lab keeps different hours than you it may be difficult to find reagents or get help with experiments.

- ❖ What hours do lab members keep?
 - What hours does the PI keep?
 - Does he/she expect you to be in the lab at the same time?
 - Do you keep the same hours as other lab members?
 - Do people come in early, or stay late at night?
 - Are they willing to set up a culture/turn down a gel/etc. for you on weekends?
- ❖ Do lab members eat lunch together?
 - Do they discuss science over lunch?
 - Do others in the lab let you know if the group is having lunch?
- ❖ Do lab members arrange social events/outings together?
- ❖ Does it seem like there is any disparity between lab members who socialize together and those who do not?
- ❖ Are there cliques within the lab? If so, do people mix between them?
- ❖ What is the lab meeting dynamic?
 - Do younger students ask questions?
 - Do post-docs participate?
 - What is the tenor of the questions?
- ❖ Is there music playing in the lab?
 - Do people have individual radios?
 - Are people listening to headphones?
 - Are they unapproachable?
 - Do all lab members have a say in the music?
 - Is the music only on when the PI is gone?
- ❖ Can you surf the internet while you wait for things to run?
- ❖ How many computers does the lab have?
 - Does everyone have a computer at their desk?
 - Will you get a computer if you join the lab?
 - Is it difficult to gain access to common lab computers?
- ❖ Does the lab celebrate birthdays, weddings, babies?
- ❖ Does the lab celebrate thesis defenses/jobs?
 - In the lab? At a separate party?
 - Do you feel obliged to go to these parties, if they occur?



Your future plans

Some people come to graduate school with the ultimate goal of becoming a professor and some are interested in receiving a training that they can apply in other fields. It's difficult to know what you'll do when you first enter graduate school and many who thought they would choose one path will choose another by the end. Regardless, choosing a thesis lab will influence the path that you take and both present opportunities and constraints.

- ❖ Does the PI encourage collaborations with other labs?
 - Within the lab?
- ❖ Are classes seen as a waste of time by the PI?
- ❖ Would you be encouraged or discouraged from taking a class at Wood's Hole or CSHL?
- ❖ What does the PI think about students taking time to teach undergraduates? What about getting a teaching certificate?
- ❖ Does the PI communicate areas that she thinks you should work on or does she wait until the letter of recommendation?
- ❖ If you aren't interested in continuing in academia, is that okay?
 - With the PI?
 - With the members of the lab?
- ❖ Does the PI see him/herself as a trainer and educator of young scientists?
- ❖ If it made sense for your project to take a biostatistics class at HSPH, or computer programming class in Cambridge, would your PI support you in this?
- ❖ Are there any students in the lab who are involved in the DMS Paths Program? How would the PI feel if you spend a bit of time on Paths Program activities?

Different things to think about:

- What kind of results do you like? Visual? Quantitative? Precise?
- How long does each experiment take?
- Model system: are you comfortable with the approaches used?
- How much time is preparing for an experiment (reagents, methods), and how much time is doing the experiment?